

Remarks

The present response is to the Office Action mailed the above-referenced case on June 06, 2006. Claims 1-39 are standing for examination. Claims 1-39 are rejected under 35 U.S.C. 102 (b) as being anticipated by Dobbins et al. (U.S. 5,751,971), hereinafter Dobbins.

Applicant has carefully studied the reference provided by the Examiner, and the Examiner's rejections and statements of the instant Office Action. In response to the Examiner's rejection of applicant's claims, applicant herein provides argument to more particularly point out and clarify to the Examiner the subject matter of applicant's invention regarded as patentable, which the applicant believes is not taught by Dobbins.

Regarding applicant's independent claims 1, 7, 13 and 25, applicant previously argued that the key and patentable aspect of applicant's invention is that an addressable virtual grouping (S-bond 802) is provided within another addressable virtual interface (P-bond 801). S-bond 802 and P-bond 801 are both addressable in layer 3. However, each of the individual ports cannot be, and do not need to be addressed in layer 3. Referring again to applicant's Fig. 8, in layer 3 the four physical links to LC1 can be addressed, as well as P-bond 801 and S-bond 802. Bonds 801 and 802 are virtual interfaces having components of one another at separate routing levels. Virtual S-bond 802 is actually nested within virtual P-bond 801. Applicant's invention provides for having a virtual interface, or bond, composed of another virtual interface, which could itself have a virtual interface and a physical interface, or just a physical interface. One bond can be composed of other bonds which could be composed of other virtual bonds or physical bonds in any combination.

The Examiner responds to applicant's above argument in the current Office Action stating that; "b) In response to applicant's argument, see Remarks (pp 9-12) for claims 1,7,13 and 25 and dependent claims 2-6,8-12,14-24 and 26-39 that the reference fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims."

Applicant points out to the Examiner that every independent claim presented in applicant's specification clearly recites at least one hierarchical bond having a logical interface as a component of the bond at a top level of the hierarchy, and a first subjugate logical interface at a second level of the hierarchy as a component of the top-level logical interface.

Applicant clearly teaches a primary bond (P-bond) 801 is illustrated in this example as an aggregation of 14 data links. Six data links of P-bond 801 are ported to LC 3. An S-bond (S-bond) 802 is also illustrated in this example as an aggregation of seven data links. The seven links of the S-bond are seen as a single data link of the P-bond in layer 3 (page 23, lines 10-14).

Applicant's argues Dobbins clearly teaches a multi-interface router 11 for connecting several physical networks to an IP internet. The router 11 includes multiple interfaces 12A, 12B, each of which connects to a physical networks 13A & 13B including one or more hosts 14. Applicant argues that each workgroup of Dobbins has a separate IP address than that of logical interfaces 12A and 12B (col. 5, line 60 to col. 6, line 14).

Referring the Examiner now to applicant's specification with reference to Fig. 7, a network routing table (NRT) 700 is shown having a primary bond 701 and a physical bond 702. Primary bond 701 can be any number of physical interfaces which may be defined by software. Physical bond 702 is simply a physical interface. In prior art, if the primary bond 701 of NRT 700 connects to each of the physical interfaces of the forwarding plane (layer 2), that primary bond might consist of the six physical interfaces (P), and physical bond 702 is the seventh physical interface.

Applicant's invention defines sub-interfaces (bonds) below primary bond 701 so that the primary bond might consist of a sub-bond 703 and two physical interfaces, and sub-bond 703 would consist of three physical interfaces. As shown in the figure, there are a total of five physical interfaces in layer 2 (control plane), but they are addressed in layer 3 as three virtual interfaces. Two physical interfaces may be addressed as a virtual

interface, and the forwarding in layer 3 does not know whether it is sending data to a virtual or physical interface. It does not need to know because it has an address and sends data to that address.

The idea of bonds as discussed in applicant's background section is well-known in the art. However, applicant argues that having bonds within bonds was not known at the time of the invention. Applicant's invention teaches true hierarchical bonding structure, which is clearly not taught in the invention of Dobbins.

Given applicant's arguments above, independent claims 1, 7, 13 and 25, all of which recite hierarchical bonding structure, are clearly and unarguably patentable over the reference of Dobbins. Depending claims 2-6, 8-12, 14-24 and 26-39 are then patentable on their own merits, or at least as depended from a patentable claim.

As all of the claims standing for examination have been shown to be patentable as argued over the art of record, applicant respectfully requests reconsideration, and that the present case be passed quickly to issue. If there are any time extensions needed beyond any extension specifically requested with this response, such extension of time is hereby requested. If there are any fees due beyond any fees paid with this amendment, authorization is given to deduct such fees from deposit account 50-0534.

Respectfully Submitted,
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